

Abstract

A burner head has at least two and preferably four openings (45) in an aperture plate (37), with uniformly inclined guide blades (23) for the delivery of incoming air in the direction of an axis (31) to a combustion chamber (15) in the form of incoming air jets (53) intersecting one another in the chamber. Between the openings (45), blocking blades (27) are embodied, for forming peripheral underpressure zones (55) between the incoming air jets (53). The incoming air jets (53) are deflected by the guide blades (23) into a position that is inclined relative to the axis (31). The incoming air jets (53) therefore diverge and as a result create a central underpressure zone (57) about the axis (31) between the incoming air jets (53). By means of the central underpressure zone and the inclination of the incoming air jets, a rotation of the incoming air is achieved. In operation of the burner, hot gases from outside are aspirated into the peripheral underpressure zones (55) and, counter to the flow direction of the incoming air, into the central underpressure zone (57) between the incoming air jets (53). These flow conditions create ideal conditions for the combustion of gaseous, liquid and/or particulate fuel in a calm, cool, low-polluting flame. This combustion is practically independent of the size and shape of the combustion chamber and of the pressure conditions in the combustion chamber, for combustion installations of 16 kW to 1000 kW, or more.